



# MUCORMYCOSIS OF ORAL MUCOSA

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## ABSTRACT

Mucormycosis is an emerging angioinvasive infection caused by the ubiquitous filamentous fungi of the Mucorales order of the class of Zygomycetes. Mucormycosis has emerged as the third most common invasive mycosis in order of importance after candidiasis and aspergillosis in patients with hematological and allogeneic stem cell transplantation. Mucormycosis also remains a threat in patients with diabetes mellitus in the Western world. Furthermore, this disease is increasingly recognized in recently developed countries, such as India, mainly in patients with uncontrolled diabetes or trauma. Epidemiological data on this type of mycosis are scant. Therefore, our ability to determine the burden of disease is limited. Based on anatomic localization, mucormycosis can be classified as one of 6 forms: (1) rhinocerebral, (2) pulmonary, (3) cutaneous, (4) gastrointestinal, (5) disseminated, and (6) uncommon presentations. The underlying conditions can influence clinical presentation and outcome.

**KEYWORDS:** Mucormycosis, Fungal Infection.

## INTRODUCTION:

Mucormycosis is a fungal infection commonly affecting structures in the head and neck, such as the air sinuses, orbits, and the brain. Common predisposing factors include diabetes mellitus and immunosuppression. Early diagnosis and prompt treatment can significantly reduce the mortality and morbidity of this lethal fungal infection. It is one of the most rapidly progressing and lethal form of fungal infection in humans which usually begins in the nose and paranasal sinuses. The fungus causing the infection invades the arteries, forms thrombi within the blood vessels that reduce blood supply and cause necrosis of hard and soft tissues.

## DISCUSSION:

Mucormycosis is a rare but emerging fungal infection with a high mortality rate. Most of the existing epidemiological studies of mucormycosis are retrospective and limited. The literature contains few prospective, population-wide studies of it.<sup>3</sup>

Usually occur in immunocompromised patients. The predisposing factors for mucormycosis are uncontrolled diabetes (particularly in patients having ketoacidosis), malignancies such as lymphomas and leukemia's, renal failure, organ transplant, long term corticosteroid and immunosuppressive therapy, cirrhosis, burns, protein energy malnutrition and AIDS.<sup>2</sup>

Usually mucormycosis occurs as a pulmonary, gastrointestinal, disseminated or rhinocerebral infection.

Disseminated involvement of mucormycosis observed in diabetics with ketoacidosis, which favors rapid proliferation of fungus and its invasion into the orbit and cerebrum. Mucormycosis is aggressive and potentially fatal in diabetic patients because of impaired host defense mechanism and increased availability of micronutrients such as iron.

However the infection may spread to involve the cranium, orbit and other organs. Therefore, a team of specialists including a dentist, ophthalmologist, neurosurgeon and maxillofacial surgeon are required for management of such patients. Recent reports have suggested that jaw necrosis can also occur in patients on bisphosphonate therapy. Three principles in the patient management should be followed. Firstly, control of diabetes for which the patient was advised insulin therapy and dietary restrictions. Secondly, removal of the necrotic bone, which acted as a nidus of infection and prevented action of systemically administered antifungal drugs (due to thrombosis of blood vessels). Lastly, amphotericin B is to be administered parenterally as it is the drug of choice in treatment of mucormycotic infection. Mucormycosis was long regarded as a fatal infection with poor prognosis.

However with early medical and surgical management survival rates are now thought to exceed 80%. In conclusion, an immunocompromised or immunosuppressed patient having bone necrosis following tooth extraction should alert a clinician of possible mucormycotic infection.

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